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Amended patent claims

1. A thermoplastic molding composition comprising components A, B, C and D, and also, where appropriate, E, F, G and H, the entirety of which gives 100% by weight:

 - A) from 1 to 97.5% by weight of at least one aromatic polycarbonate A,
 - B) from 1 to 97.5% by weight of at least one graft polymer B made from
 - b1) from 40 to 80% by weight of a graft base made from an elastomeric polymer B1 based on alkyl acrylates having from 1 to 8 carbon atoms in the alkyl radical, on ethylene-propylene, on dienes, or on siloxanes, and having a glass transition temperature below 0°C,
 - b2) from 20 to 60% by weight of a graft B2 made from
 - b21) from 60 to 95% by weight of styrene or of substituted styrenes B21 of the formula I

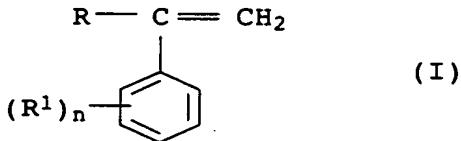
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$$\begin{array}{c} R - C = CH_2 \\ | \\ (R^1)_n - \text{C}_6\text{H}_4 \end{array} \quad (I)$$

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where R is C₁₋₈-alkyl or hydrogen and R¹ is C₁₋₈-alkyl and n is 1, 2 or 3, or a mixture of these, and

 - b22) from 5 to 40% by weight of at least one unsaturated nitrile B22,
 - C) from 1 to 97.5% by weight of at least one thermoplastic copolymer C made from
 - c1) from 60 to 85% by weight of styrene or of substituted styrenes C1 of the formula I, or a mixture of these compounds, and
 - c2) from 15 to 40% by weight of at least one unsaturated nitrile C2,



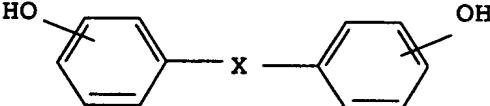
where R is C₁₋₈-alkyl or hydrogen and R¹ is C₁₋₈-alkyl and n is 1, 2 or 3, or a mixture of these, and

b22) from 5 to 40% by weight of at least one unsaturated nitrile B22,

C) from 1 to 97.5% by weight of at least one thermoplastic copolymer C made from

40 c1) from 60 to 85% by weight of styrene or of substituted
styrenes C₁ of the formula I, or a mixture of these
compounds, and

45 c2) from 15 to 40% by weight of at least one unsaturated
nitrile C2,

- D) from 0.5 to 50% by weight of at least one copolymer D,
obtainable via reaction of
- 5 d1) from 5 to 95% by weight of at least one
thermoplastic methacrylate polymer D1 containing at
least one type of functional groups selected from
epoxy, carboxy, hydroxy, anhydride and oxazoline,
with
- 10 d2) from 5 to 95% by weight of at least one
thermoplastic polyester D2,
- E) from 0 to 40% by weight of at least one filler E,
- 15 F) from 0 to 2% by weight of at least one organic acid F,
- G) from 0 to 25% by weight of at least one halogen-free
phosphorus compound G,
- 20 H) from 0 to 45% by weight of other additives H.
2. A molding composition as claimed in claim 1, where the
polycarbonates A are based on biphenols of the formula II
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(II)
- 30 where X is a single bond, C₁₋₃-alkylene, C_{2-C₃}-alkylidene,
C₃₋₆-cycloalkylidene, or else -S- or -SO₂-.
3. A molding composition as claimed in claim 1 or 2, where the
graft base B1 of the graft copolymer B is composed of
- 35 b11) from 70 to 99.9% by weight of at least one alkyl
acrylate B11 having from 1 to 8 carbon atoms in the
alkyl radical,
- 40 b12) from 0 to 30% by weight of another copolymerizable
monoethylenically unsaturated monomer B12, or a mixture
of these,
- 45 b13) from 0.1 to 5% by weight of a copolymerizable,
polyfunctional crosslinking monomer B13,

where the entirety of B11, B12 and B13 gives 100% by weight.

4. A molding composition as claimed in any of claims 1 to 3, where the copolymer C is composed of from 70 to 83% by weight of styrene and from 17 to 30% by weight of acrylonitrile.
5. A molding composition as claimed in any of claims 1 to 4, where the methacrylate polymer D1 is composed of
 - 10 d11) from 80 to 99.9% by weight of methyl methacrylate D11,
 - d12) from 0 to 19.9% by weight of at least one other acrylate or methacrylate D12, and
 - 15 d13) from 0.1 to 10% by weight of at least one monomer D13, containing at least one type of functional groups selected from epoxy, carboxy, hydroxy, anhydride and oxazoline,
- 20 where the entirety of D11, D12 and D13 gives 100% by weight.
6. A molding composition as claimed in any of claims 1 to 5, where the monomer D13 used comprises glycidyl methacrylate, allyl glycidyl ether, isopropenyl glycidyl ether, or a mixture of these.
- 25 7. A molding composition as claimed in any of claims 1 to 6, where the copolymer D is obtainable via melt compounding of the methacrylate polymers D1 with the polyester D2.
- 30 8. A molding composition as claimed in any of claims 1 to 7, where the filler D has been selected from the group consisting of particulate mineral fillers, fibrous fillers, and mixtures of these.
- 35 9. A process for preparing molding compositions as claimed in any of claims 1 to 7, by mixing the dry components A to D and, where appropriate, E to H at from 200 to 320°C.
- 40 10. The use of molding compositions as claimed in any of claims 1 to 7 for producing moldings, fibers or films.
11. The use as claimed in claim 10 for producing bodywork parts.
- 45 12. A molding, a fiber, or a film, made from a molding composition as claimed in any of claims 1 to 8.

13. A molding as claimed in claim 12 in the form of a bodywork part.
14. The use of copolymers D as defined in claim 1 as compatibilizer in molding compositions in which polycarbonates, graft polymers, and styrene copolymers are present.
15. A copolymer D, obtainable via reaction of
- 10 d1) from 5 to 95% by weight of at least one thermoplastic methacrylate polymer D1 composed of
- 15 d11) from 80 to 99.9% by weight, preferably from 85 to 99.3% by weight, and in particular from 90 to 98.9% by weight, of MMA (component D11),
- 20 d12) from 0 to 19.9% by weight, preferably from 0.5 to 14.8% by weight, and in particular from 0.6 to 9.5% by weight, of at least one other acrylate or methacrylate D12, and
- 25 d13) from 0.1 to 20% by weight, preferably from 0.2 to 15% by weight, and in particular from 0.5 to 10% by weight, of at least one monomer D13 containing at least one type of functional groups selected from epoxy, carboxy, hydroxy, anhydride, and oxazoline,
- 30 where the entirety of d11), d12), and d13) gives 100% by weight,
with
- 35 d2) from 5 to 95% of at least one thermoplastic polyester D2, selected from polyethylene terephthalate and polybutylene terephthalate, or a mixture of these.

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Polycarbonate/styrene copolymer blends with improved properties

Abstract

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Thermoplastic molding compositions comprising the components A, B, C and D and, if appropriate, E, F, G and H,

A) from 1 to 97.5% by weight of at least one aromatic 10 polycarbonate A,

B) from 1 to 97.5% by weight of at least one graft polymer B made from

15 b1) from 40 to 80% by weight of a graft base made from an elastomeric polymer B1,

b2) from 20 to 60% by weight of a graft B2 made from

20 b21) from 60 to 95% by weight of styrene or of substituted styrenes B21 and

b22) from 5 to 40% by weight of at least one unsaturated nitrile B22,

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C) from 1 to 97.5% by weight of at least one thermoplastic copolymer C made from

30 c1) from 60 to 85% by weight of styrene or of substituted styrenes C1 or mixtures thereof and

c2) from 15 to 40% by weight of at least one unsaturated nitrile C2,

35 D) from 0.5 to 50% by weight of at least one copolymer D, obtainable via reaction of

40 d1) from 5 to 95% by weight of at least one thermoplastic methacrylate polymer D1 containing at least one type of functional groups selected from epoxy, carboxy, hydroxy, anhydride and oxazoline, with

d2) from 5 to 95% by weight of at least one thermoplastic polyester D2,

45 E) from 0 to 40% by weight of at least one filler E,

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- F) from 0 to 2% by weight of at least one organic acid F,
- G) from 0 to 25% by weight of at least one halogen-free phosphorus compound G,
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- H) from 0 to 45% by weight of other additives H.

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